

An
Inaugural Essay,
on
Hæmoptysis.

Submitted to the examination
of the

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Professors of the

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For the degree of

Doctor of Medicine.

Thos. A. Cook

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Admission to the

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Preface

In obedience to that law of the University of Pennsylvania, which demands of those who become candidates for its honours in the department of Medicine, a Dissertation on some medical subject, I have written the following pages.

A consideration of my youth and inexperience, in conjunction with the liberality of those to whom the following Thesis is submitted, encourages me to expect their indulgence; and renders any apology for the imperfection of the following sheets superfluous. The subject I have chosen is hæmoptysis. This of itself being sometimes immediately a fatal disease and more frequently terminating in that deplorable scourge of mankind Phthisis Pulmonalis, which so often consigns to an early tomb, those who had

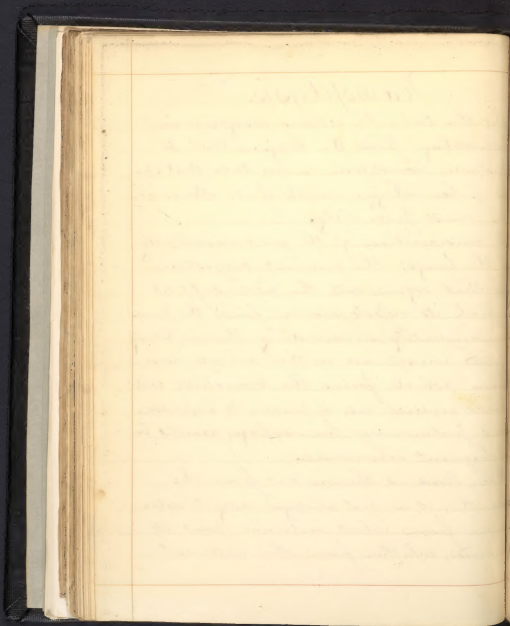
otherwise shown as stars in their respective
spheres and shed usefulness around
them, renders it a subject in my estimation
of no small importance. In what
I have written on the subject of hamoptysis
I pretend to nothing original; indeed as
it is a disease that seems pretty well
understood, (and therefore well suited to ex-
ercise the pen of youth and inexperience)
what I shall say will be little else
than a detail of the experience of others.

Hæmoptysis.

By this term, Physicians designate an hæmorrhage from the lungs. Next to epistaxis, hæmoptysis is said to be that species of hæmorrhage; which of all others occurs most frequently.

A consideration of the great vascularity of the lungs; the frequent congestions of that organ; and the little support which its vessels receive from the parts immediately surrounding them, (being spread undepended on that delicate membrane which forms the bronchial cells) would induce us, a priori, to suppose, that pulmonary hæmorrhage would be of frequent occurrence.

When blood is thrown out from the mouth, it is not always easy to determine from what internal part it proceeds; whether from the internal



surface of the mouth itself; from the
fauces or adjoining cavities of the nose;
from the stomach, or the lungs; however
when the blood is thrown out by coughing
after some previous affection of the breast,
there is little doubt that it comes from
the lungs. Hemoptysis is often a heredita-
ry disease, which implies a peculiar and
faulty conformation, transmitted from
ancestors to their offspring.

The causes, both predisposing and exciting,
are various.

There are few forms of disease, which
come under the cognizance of the Phys-
ician, in which the marks of predispo-
sition, are more evidently perceptible,
than in hemoptyses.

In some persons who have a narrow chest
and prominent shoulders, a faulty pro-
portion may be supposed to exist between

the capacity of the pulmonary system
of blood vessels, and that of the arterial sys-
tem; such persons are frequently the
victims of hæmoptoe.

Persons of a sanguine temperament, of a
slender, delicate, make; who are possessed
of much sensibility and irritability, and
therefore of quick parts, and those who
have short necks are are of a plethoric
habit, are more liable to be attacked
with pulmonary hæmorrhage, than those
of opposite character, we refer on to the
above particulars.

Those who have been immurely liable to
epistaxis; or who are occasionally subjected
to the suppression of some accustomed dis-
charge, as the hæmorrhoidal or in the female,
the catamenial; likewise those who have
suffered the amputation of any consid-
erable limb, are predisposed to the disease.



Hæmoptoe most commonly occurs about the age of puberty, & between the age of sixteen and thirty five, but it may be occasioned by external violence at any period of life.

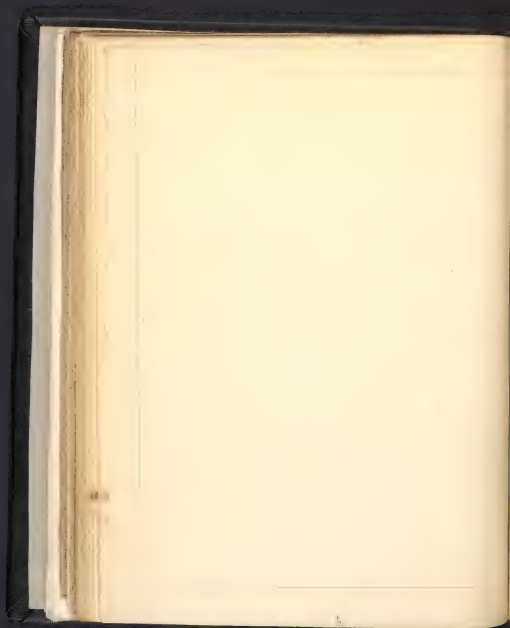
The exciting causes are various. The most general of which are, external violence; violent exertions; as in lifting heavy weights, jumping, Wrestling, singing long continued and violent speaking, blowing wind instruments, violent coughing &c. Intemperance in living and the stresses of heat in a cold may also act as exciting causes.

It was first observed where this disease, hæmoptoe, was first noticed by De Saussure who ascended the Alps, and subsequently confirmed by Baron Humboldt, who ascended the vast Mountains of South America; De Saussure states, that hæmoptoe



direct from this large upon the slightest exci-
tation, when upon the top of the it. Hence.
There are various species of pulmonary haem-
orrhage, which are dangerous in proportion
to the causes which produce them.

Haemorrhage may be produced by a more
rupture of the vessels or by violent inflam-
mation of the lungs, which often termi-
nates fatally. The haemorrhage relieving
the lungs of the violence of inflammation.
It may be vicarious as in suppression of
the catamenia, or it may arise from a
metastasis, as from suppression of the hum-
ors, then seldom more fatal except
the haemorrhage is profuse and of long con-
tinuance. Haemoptoe may arise from
hemorrhage generally terminating fatally.



Symptoms.

Hæmoptysis is divided by Dr Cullen into active and passive; in the former there is an increase of the arterial excitement, in the latter a decrease.

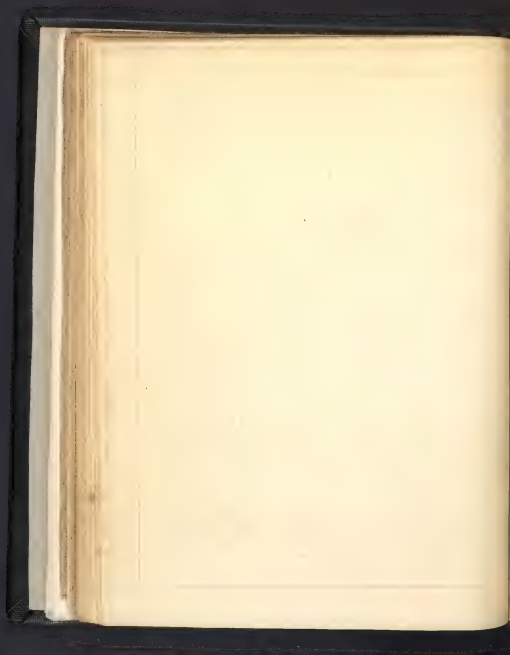
When the hæmorrhage is from the lungs, the blood is shot up hotly, fluid, of a blood colour, and is brought up with minor or less coughing, and freer eases, generally, but a sickish taste in the saliva, a sense of fulness and oppression in the thorax, a degree of irritation at the top of the trachea, which causes a slight cough, also with a sense of heat under the sternum, pain in some part of the thorax and difficulty of respiration; though sometimes it is ushered in with shiverings, coldness of the extremities, pain in the back and limbs, flatulency, costiveness and lassitude. The pulse in the first stage is generally



frequent, such haemorrhages, the blood is generally brought up first in small quantities, but sometimes large from the commencement.

Diagnosis.

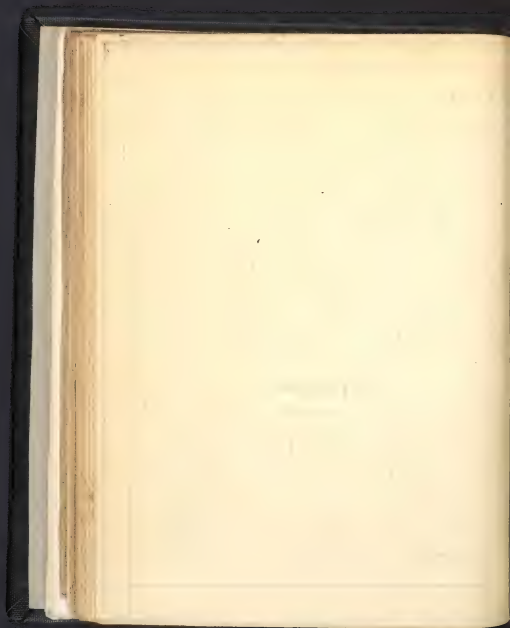
Hæmorrhage from the fauces is a more rare occurrence than from the lungs; it is early attended with fever and, generally, when inspection the source of the blood becomes evident; the blood discharges is, rarely, if ever, so clear a colour as that proceeding immediately from the lungs. In hæmatæmesis the hæmorrhage is not preceded or attended with any pulmonary affection, no dyspnoea, cough &c; the blood is brought up by vomiting, and is darker coloured and greenish, generally in greater quantity, and mixed with the other contents of the stomach.



Hæmatemesis is distinguished also by its being usually preceded by a sense of weight, pain or anxiety in the region of the stomach, the pulse likewise for the most part is much more reduced by a hæmorrhage from the stomach than from the lungs: the pulse has been rendered almost imperceptible by a moderate hæmatemesis, which is rarely the case in hæmoptysis, except where the loss of blood has been very profuse, or the terms produced inordinately great.

Prognosis.

If the discharge be small, if it be not the consequence of hereditary predisposition; if it be neither preceded nor attended by preliminary complaints, as dyspepsia, pruritus &c. if it appear in consequence of a rupture of a small vessel or follow pneumonia, inflammation, it may generally



be considered as a favorable case.

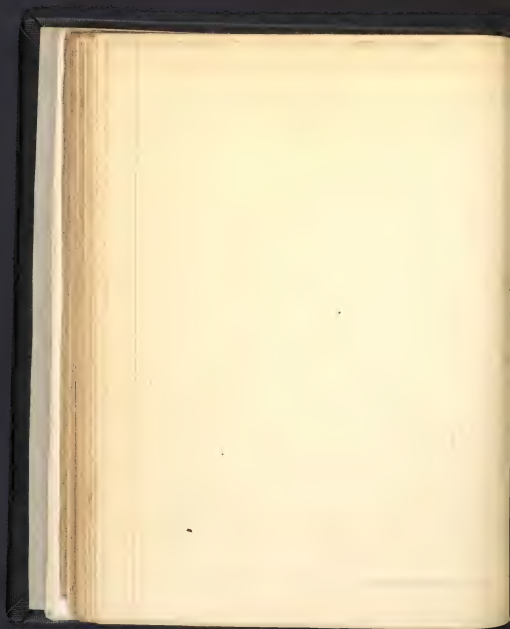
A continuance state of things is to be regarded as more unfavorable.

Treatment.

In the treatment of hæmoptoe the practitioner will be influenced by the causes which produced it, as, as well as in the general state of the system by which it is accompanied.

When called to a patient with hæmoptoe attended with fever, hot, and slow, sense of weight, oppression and some pain of the breast &c, we should abstract blood in such quantity as to produce a diminution in the force of the arterial system.

In addition to bloodletting a general antiphlogistic regimen must be adopted; the patient must be kept completely at rest and have the room fresh.



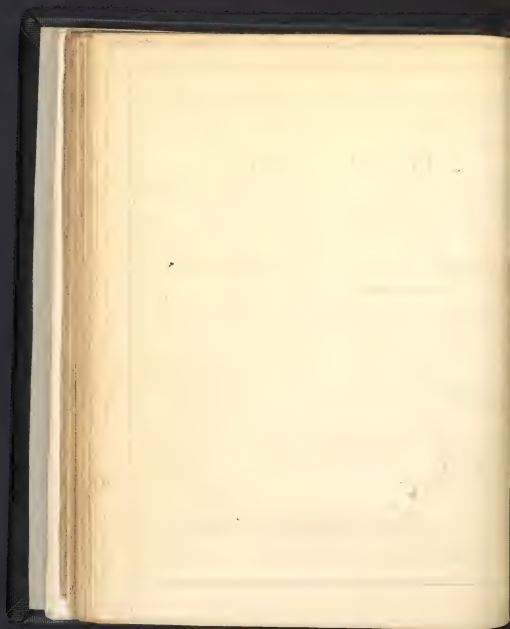
ventilated, he should avoid speaking and the bowels should be kept in a soluble state.

Muriate of Soda.

This may be given in doses of from $\mathfrak{z}\text{ss}$ to $\mathfrak{z}\text{ss}$ V ; it may be repeated every two hours or often-er; its effects are very prompt; Dr Rush employed it with success both in hæmoptysis and hæmatemesis, and in several cases of slight hæmoptysis, I have known it wholly adequate in restraining the hæmorrhage, how it acts is not very intelligible, but it is supposed the action excited on the trachea and fauces, is extended by sympathy to the lungs constricting the vessels and stopping the hæmorrhage.

Cold applications.

Cold applied to the scrotum or caities,



has had a very good effect in restrain-
ing hemorrhage. It was suggested by
Larwin, and since recommended by
others, to wrap the whole body up in a
sheet made wet with cold water or vine-
gar and water.

Saccharum Saturnis

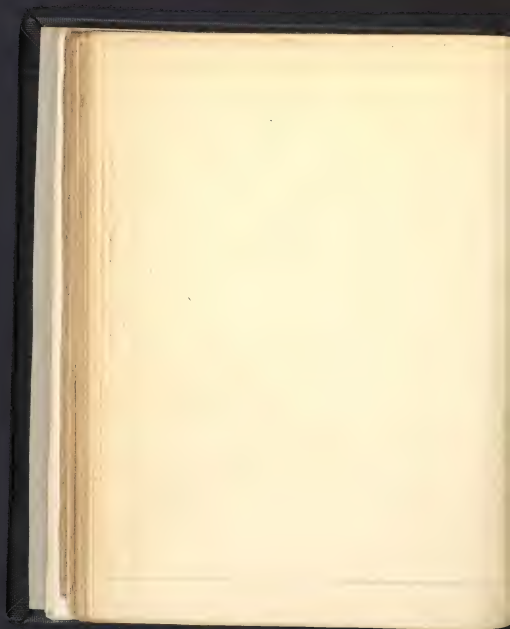
This was recommended by some of the
old practitioners, it was condemned by
Cullen and others on account of the toxic-
ity of the practice. The merit of restoring
this medicine into practice is due
to the late Dr. Barton, who approved
and highly recommended it; it
may be given in doses of from 5 to
5 grains combined with opium in moder-
ate proportions of two grains of the sac-
charum saturnis to half grain of opium.
Professor Chapman gave a series of the



Trochanter Internus; and even a stroke
has been given without any dangerous
consequences. It appears sufficient to restrain
slight hæmorrhages, but does not
appear fully adequate to arrest violent
and profuse hæmorrhage, as in a more
violent case of hæmorrhysis, Dr. Chapman
has given a scruple without stopping
the flow of blood.

Narcotics.

Opilator, This medicine has been highly
recommended, from its power of dimin-
ishing arterial action. It is insensibi-
lizing and will sometimes procure vom-
iting; it appears best adapted to slight
discharges of blood attended with pain in
the breast or side and great irritability of
system —

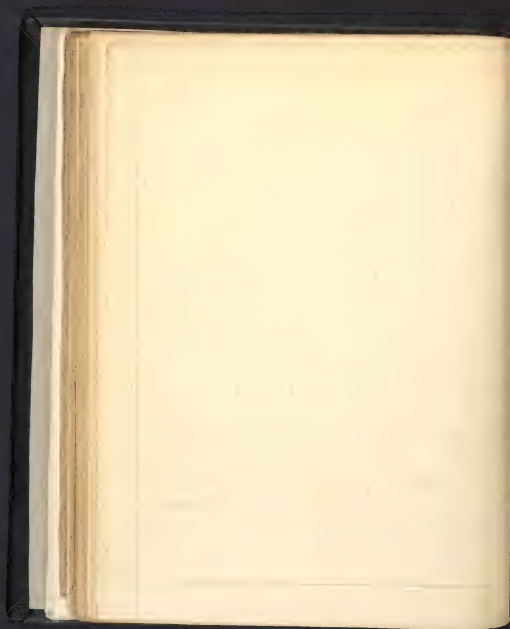


Hjoscyanus.

This medicine, it is said, is different preparations, have been used successfully by the German Physicians.

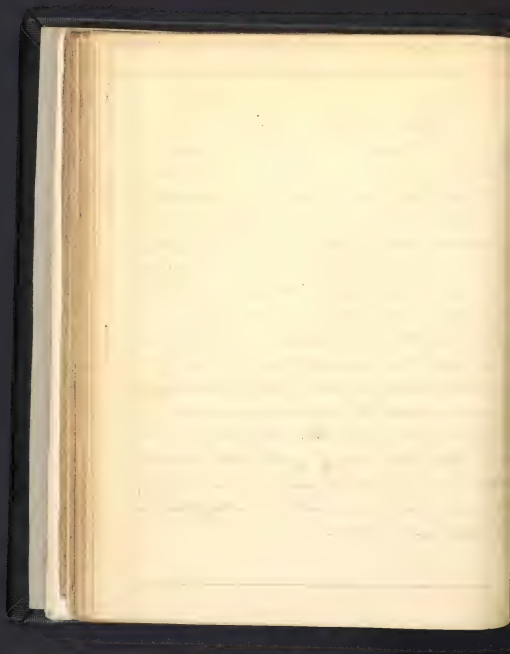
Opium.

Opium, as being a stimulant, would seem to be prescribed in action or some hæmorrhage at least. Yet in those cases of hæmorrhages which are unattended by fever, but when there is cough which seems to have the effect of aggraving the disease opium has been administered with advantage. it allays the easy to general irritation and restlessness of the patient and in this way has been efficacious in putting a stop to the flow of blood especially when it depended on exertions occasioned by coughing.



Emetics.

On the authority of B. J. Robinson, emetics have been considerably used. Although hæmorrhage has been checked by spontaneous vomiting (In Chalmers was a violent case of hæmorrhage, suppressed by a dose of digitalis which vomited) yet emetics do not appear to be proper in the natural state; they should not be employed in the commencement, if fever exists, except in small and frequently repeated doses, so as to keep up nausea, in such cases the localized antimony is said to be preferable. The vitriolic solution has had a very good effect in stopping hæmorrhage, given in nauseating doses, its effect in fact, probably owing to its astringent virtues.



Ipecacuanha.

This, in combination with stramonium is
prescribed by Dr. Chapman, he gives two
grains of Ipecac and half grain of opium
in a strong tea three or four times to keep up
a considerable degree of nausea.

Blisters.

Blisters are important in haemophyses.
They have been known to check it when
all other means had failed. They should
be applied to the chest, through some ad-
vance have applied to the neck, & then to
the extremities.

The neutral salts have been recommend-
ed, nitrate of potash & nitre is consid-
ered preferable. Dr. Costello recommends nitre
in large ^{doses} combined with 1/10 of a grain
of tartarized antimony, and in a case



of hamoptysis where the patient had febrile symptoms, I gave it as an auxiliary to the lancet with very happy effect.

Passive Hamorrhagy.

In this we must resort to tonics, Poiravian bark united with calceolates have been recommended; vegetable astringents have been used as kino &c. The mineral acids are occasionally resorted to; of these the sulphuric is generally preferred, except in cases connected with scrofulous swellings where the nitric is much to be preferred. Malt liquors appear to exercise some influence over hamoptysis; of these port is preferable, as it is a liquid generally well retained by the stomach.

In conjunction with these remedies the patient should take a light nourishing diet, and use gentle exercise.

And to avoid a recurrence of the disease it is requisite to avoid all the exciting causes as excesses in eating, drinking and exercise, avoid taking cold which by bringing on inflammation would cause a recurrence, and remove as soon as possible any arterial or febrile diathesis by ^{the} lancet, diet and complete rest.

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